

Serial No. 10/031,218

Art Unit: 3773

Examiner: Darwin P. Erez

REMARKS

In response to the Patent Office rejection of September 23, 2009, the Applicant hereby requests reconsideration and reexamination. To further the prosecution of this application, further amendments have been made in the claims to distinguish over the cited prior art. To also further the prosecution of this application the Applicant requests a telephone interview after the Examiner has considered this response.

In the Patent Office Letter in paragraphs 3 through 7, the Examiner has rejected claims 5, 6, 10, 12, 20 and 23-26 under 35 U.S.C. 112. With regard to claims 5, 6, and 23-26 this width is clearly shown in the drawings. The drawings are to scale and from the drawings it is clear that the same width is illustrated. The same applies to claims 12 and 20 in that the drawings illustrate no straight section between the arcuate portions. Regarding claim 10 there is disclosure in the application of an initial closure pressure is imposed by the closure member only on the straight section. See page 6 and, in particular, the last paragraph, along with the illustration found in Fig. 2.

In the Patent Office Letter in paragraph 9, the Examiner has rejected claims 18-20 under 35 U.S.C. 102 in view of the Lingua U.S. Patent 4,519,392. As with the previous arguments relating to the Casey '725 patent, the same also applies with respect to the Lingua '392 patent. Neither of these references teaches a substantially straight section adjacent to the hinge. In Lingua such as in Fig. 1, at the living hinge it is noted that the section is either curved or on the underside is of a toothed configuration.

Moreover, it is the Applicant's position that the Lingua '392 patent does not teach both the first and second arcuate-shaped portions, nor does it teach the difference in radii between these portions. In this regard, the Applicant refers to the diagram set forth by the Examiner on page 4 of the Patent Office Action. First, the Examiner has used dashed lines added to the figure emanating from a single point and thus clearly has not illustrated two separate radii of curvature. Secondly, the Examiner's attention is directed to Fig. 1B of the Lingua '392 patent wherein it is

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clear that there is not a curvature for a substantial portion of the inner surface between the lip 13 and the tooth surface. This is clearly represented in Fig. 1B wherein the base latch at 20 and 21, and particularly at surface 20 is clearly linear and mates with and matches the contour of the upper jaw between those two points. Furthermore, close to the tooth area in Fig. 1B it would appear that a further straight portion exists at least on the inner surface. Thus, clearly, the Lingua '392 patent does not teach first and second arcuate-shaped portions as alleged by the Examiner. As a matter of fact, tracing the dotted line from the Examiner's diagram that slants to the left, this would intersect with a straight portion on the inner surface. The outer surface of the upper jaw in the Lingua '392 patent appears to be one continuous curve of the same radius.

Also, in the Lingua '392 patent the thickness of the upper jaw between the latch end and the tooth section has a different width, unlike that of the present invention wherein each of the arcuate sections and the straight section are preferably of the same width.

In the Examiner's arguments mention is made that Lingua shows the inner surface of the first arcuate section as being larger in radius than the inner surface of the second arcuate section. This is not the case. If anything, the first radius is smaller than the second radius, or as in Fig 1(b) of Lingua there are not two different radii on the inner surface. In Lingua's Fig. 1, and considering the inner surface at the distal arcuate portions, and even further assuming there are two different radii, after the sawtooth surface the first curvature is of a smaller radius than a more distal curvature. One can argue that the more distal curvature is greater even to the point of being infinite per Fig. 1(b). Thus, in claim amendments discussed hereinafter reference is made primarily to the inner surface which is also defined as a facing surface.

In paragraphs 13 and 14 of the Patent Office Letter, the Examiner has set forth a rejection of claims 1-17 and 21-27 under 35 U.S.C. 103 further relying upon the Casey et al. U.S. Patent 4,489,725. In the rejection under 35 U.S.C. 103, the Examiner relies primarily upon the Lingua '392 patent and thus the arguments previously submitted also apply to this rejection. In

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particular, neither does the Lingua '392 patent teach the claimed straight section. Moreover, the Lingua '392 patent clearly does not show separate first and second arcuate sections. Clearly, Lingua does not have both of the claimed different radii portions on an inner surface thereof. Again, reference is made to Fig. 1(b) of the Lingua '392 patent.

Thus, with regard to the rejection under 35 U.S.C. 102, it is the Applicant's position that the Lingua '392 patent does not teach both of the first and second arcuate-shaped portions as set forth in amended claims 1 and 18. Accordingly, also the dependent claims should be found in condition for allowance.

In the rejection the Examiner has also stated that the surfaces of the clip have "not been clearly defined relative to any other structure". Accordingly, both of the independent claims have now been amended in an effort to make the patentable distinctions clear.

The Examiner in the arguments also takes the position that modifying curvatures of arcuate sections only involves routine skill in the art. The Applicant disagrees. As set out in a description of the present invention, one of the goals is to be able to provide a surgical clip that can be passed through a relatively narrow applicator. This change in radius enables that to occur more readily. The first arcuate-shaped portion being of a larger radius enables an enlargement of the length of the clip while the second radius enables the clip to return more readily to an end termination preferable straight section.

The Examiner also in the arguments takes the position that it is mere obvious choice to apply pressure only on the straight section of the clip as the same result will occur. The Applicant completely disagrees. The advantage of the clip construction of the present invention is that the straight section allows the clip to be fed down a relatively narrow diameter tube and allows for a slightly larger length clip to be used. This is described in the present specification in the PCT version on page 6 at lines 3-13. Moreover, on page 6 it is also described that if the original clip construction were to be made longer, then the upper jaw would be a longer arcuate curve. This would be disadvantageous in particular in attempting to pass the clip through a narrow applicator.

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The inventors have found that when the prior art arcuate clip is used, a pressure applied to the curved portion of the upper jaw deforms the jaw. Refer to page 6 of the Applicant's specification at lines 15-25. As indicated, this can lead to surgical failures.

In accordance with the present invention, the inventors realized that this distortion problem could be solved by providing an initial straight section. The closure pressure is applied substantially at the distal end of this straight section and in this way the initial pressure does not distort the curved section as the contact pressure is not imposed at the curved section. In this regard, the Examiner's attention is directed to Fig. 2 of the present application wherein it is shown that there is a contact point with the clip at the distal end of the straight section and not over the curved portion of the clip. Thus, not only do the references not teach this straight section at the hinge, but they certainly do not teach the application of a contact pressure for closing the clip as applied at a distal end of the straight section. The use of two different radii in combination with the straight section allows the clip of the present invention to be fed down a small diameter tube in a semi-closed position and to be openable at the end of the tube, and to then be latched without any risk of the upper jaw being distorted when latching pressure is applied.

Now, with further reference to the amendments in the claims, both independent claims 1 and 18 have been further amended. These amendments in the claims are also believed to address comments made by the Examiner relating to a lack of claim structure. Claim 1 now defines the elongated upper and lower jaws as having respective facing surfaces with the first arcuate shaped portion being contiguous with the second arcuate shaped portion. The claim also defines the first arcuate shaped portion as more proximal relative to the second arcuate shaped portion. The first arcuate shaped portion is defined as having a first radius of curvature that is greater than the radius of curvature of the second arcuate shaped portion which has a second radius of curvature. Moreover, the first and second arcuate shaped portions are both defined in the facing surface of the upper jaw with the first radius of curvature and the second radius of curvature both defined by respective centers of curvature located below the upper jaw. In Lingua on the facing (inner)

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surface, if anything, the first arcuate portion has a radius smaller than the second arcuate portion, opposite to that of the present invention. Also note added claims 30 and 31 which set forth other distinguishing features of the present invention.

One of the important features of the present invention relates to the ability of the clip to pass through a relatively small passage tube in a semi-closed position and to be openable at the end of the tube, and to then be latched without any risk of the upper jaw being distorted when latching pressure is applied. One of the characteristics of the present invention that enables this important feature is the dimensional measures pertaining to the lengths of the different sections. As claimed in claim 31, one of these features is that the cumulative length of the first and second arcuate shaped portions is greater than the length of the straight section. The other feature is in claim 32 wherein the length of the first arcuate shaped portion is greater than the length of the second arcuate shaped portion. Certainly, these features are not at all taught by the cited prior art.

Reference is now also made to the amended claim 18 which adds the feature relating to the relative lengths of the various sections claimed. More particularly, claim 18 now recites that the cumulative length of the first and second arcuate shaped portions is greater than the length of the straight section. Added claim 33 adds the feature that the length of the first arcuate shaped portion is greater than the length of the second arcuate shaped portion.

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CONCLUSION

In view of the foregoing amendments and remarks, the Applicants respectfully submit that all of the claims pending in the above-identified application are in condition for allowance, and a notice to that effect is earnestly solicited.

If the present application is found by the Examiner not to be in condition for allowance, then the Applicants hereby request a telephone or personal interview to facilitate the resolution of any remaining matters. Applicants' attorney may be contacted by telephone at the number indicated below to schedule such an interview.

The U.S. Patent and Trademark Office is authorized to charge any fees incurred as a result of the filing hereof to our Deposit Account No. 19-0120.

Respectfully submitted,

Dated: January 25, 2010

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